



Merit-Based Incentive Payment System

Project Walkthrough

THE CONTEXT

What is MIPS?

The Merit-based Incentive Payment System (MIPS) is a new way by which eligible clinicians will be measured by U.S. Dept. of Health Services to determine if they are providing quality patient care in an efficient way.

Indiana University Health wanted to build an online platform for physicians & healthcare advisors where they can **report & track their performance** efficiently thereby reducing a lot of administrative burdens.

The Team

An 8 person multidisciplinary team was formed which consisted of:

- 1 Domain experts
- 1 Researcher
- 4 Developers
- 1 Project Manager
- 1 UX Designer

My Role

I worked as the **Team Lead** and **UX Designer** on this project. My responsibilities included:

- Conduct user interviews & observations
- Facilitate ideation & design decisions
- Sketching, wireframing and prototyping
- Front-end dev & collaborate with other devs
- User testing and evaluation sessions

PROBLEM STATEMENT

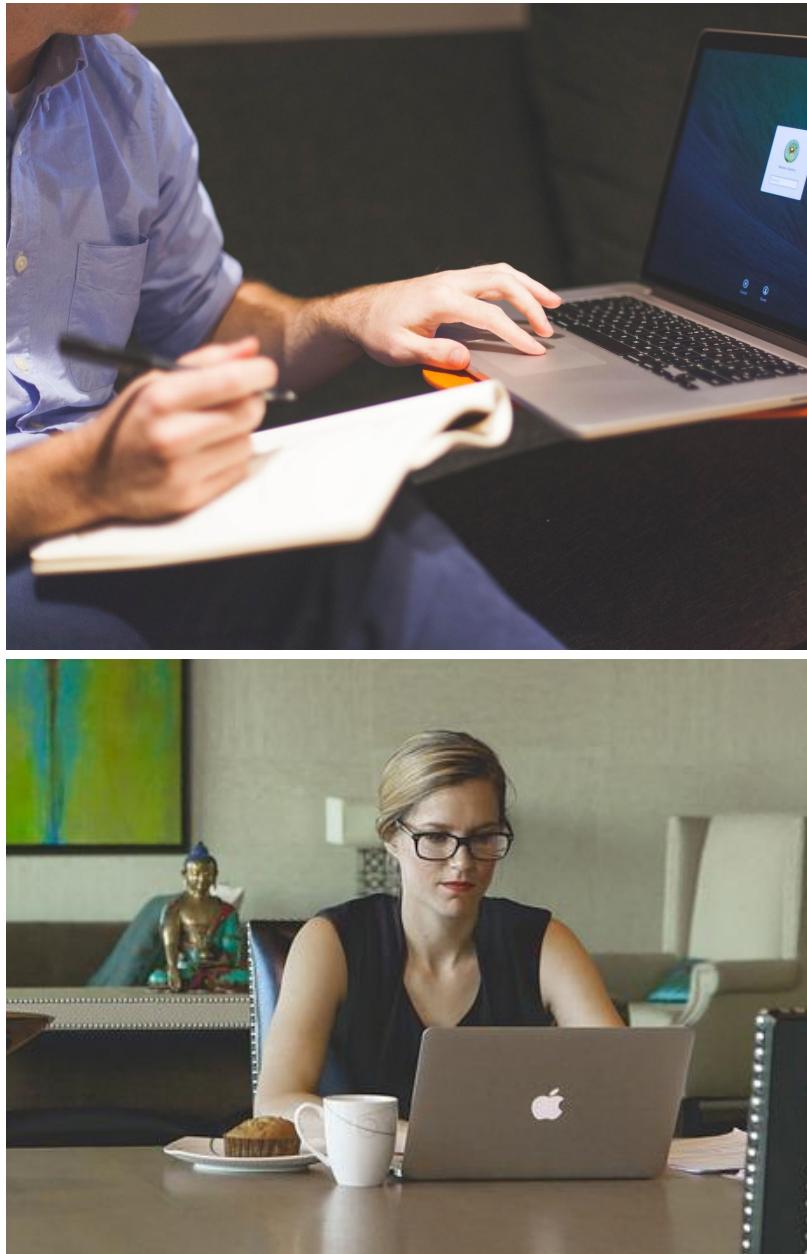
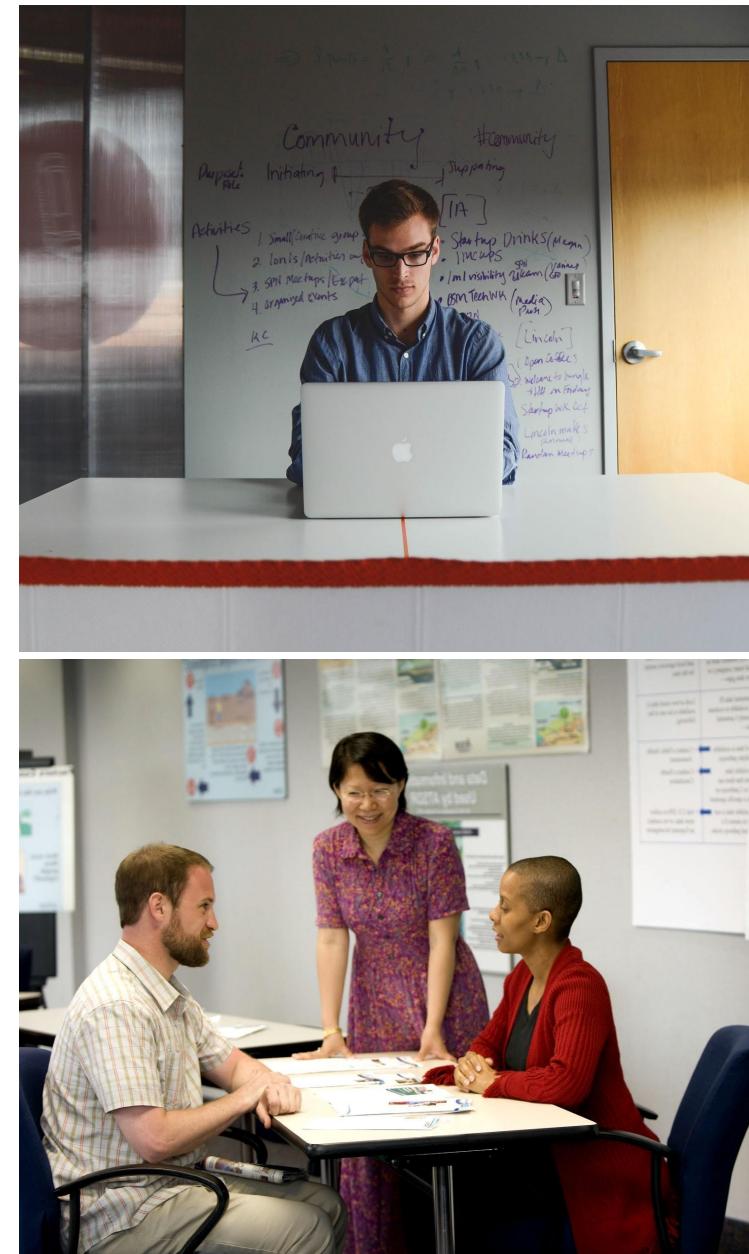
The Challenge

Create a web based portal to provide an opportunity to revise, rework and improve the data reporting system and reduce the overall administrative burdens for physicians and advisors.

TARGET AUDIENCE

Who are Users?

- The users of this tool are **Quality Improvement Advisors (QIA)**.
- QIA's acts as an internal consultant and resource to a health organization with the goal of driving improvement in quality, cost efficiency and patient satisfaction.
- They gather, compile and analyze clinical reports, identify gaps / strengths & make appropriate recommendations for corrective actions.



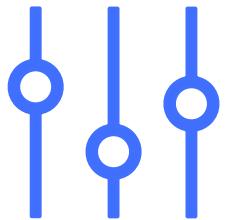
CURRENT SCENARIO

Meet Richard



COLLECT DATA

Richard is a healthcare advisor in a hospital. His job is to collect data from physicians, manage data, and derive meaningful insights.



CALCULATE SCORE

He then calculates a performance score based for each physician and shares the score with hospital administration.



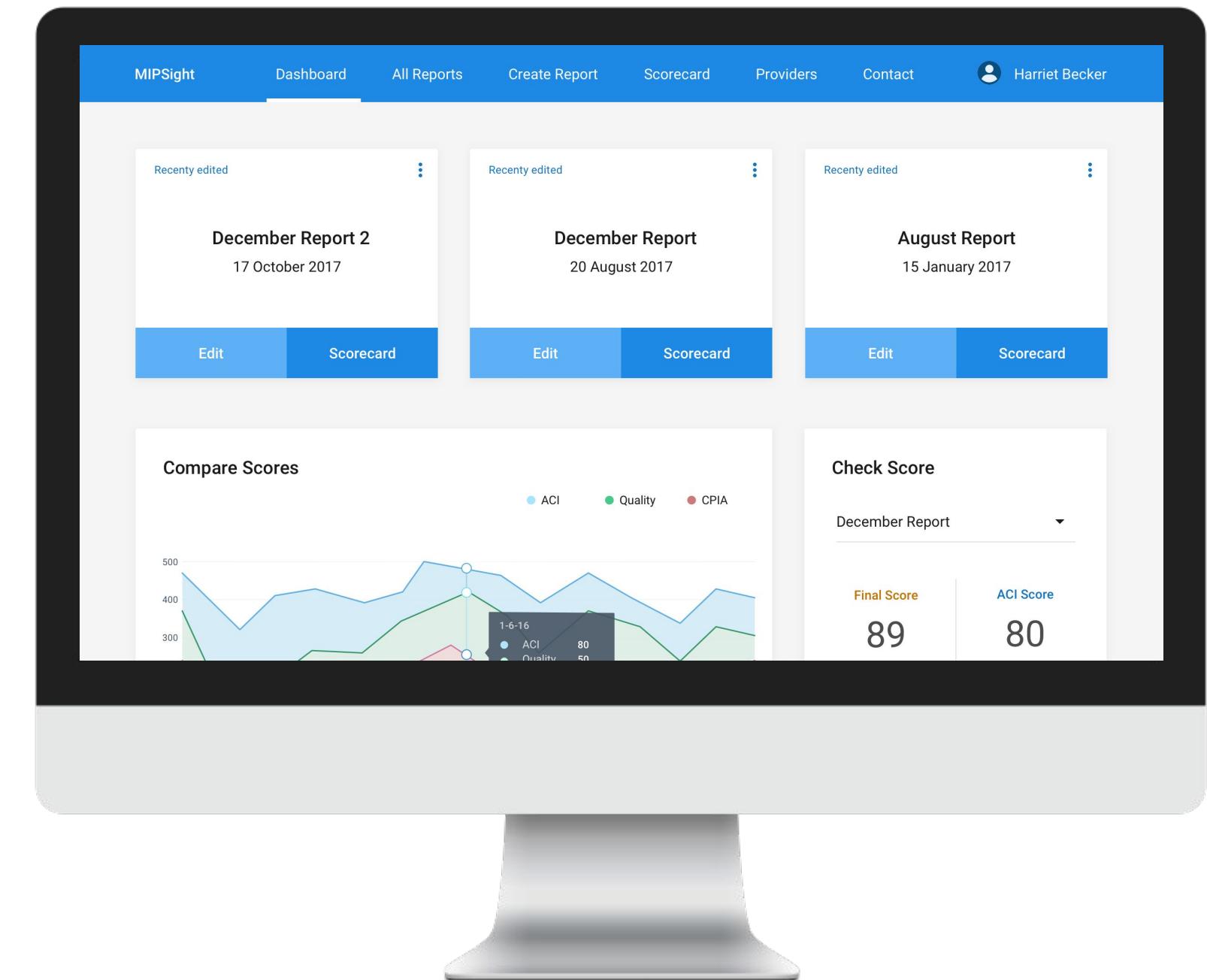
GIVE RECOMMENDATION

If the performance score is low he has to go to the physician and recommend them about things they can do to improve their score.

FINAL OUTCOME

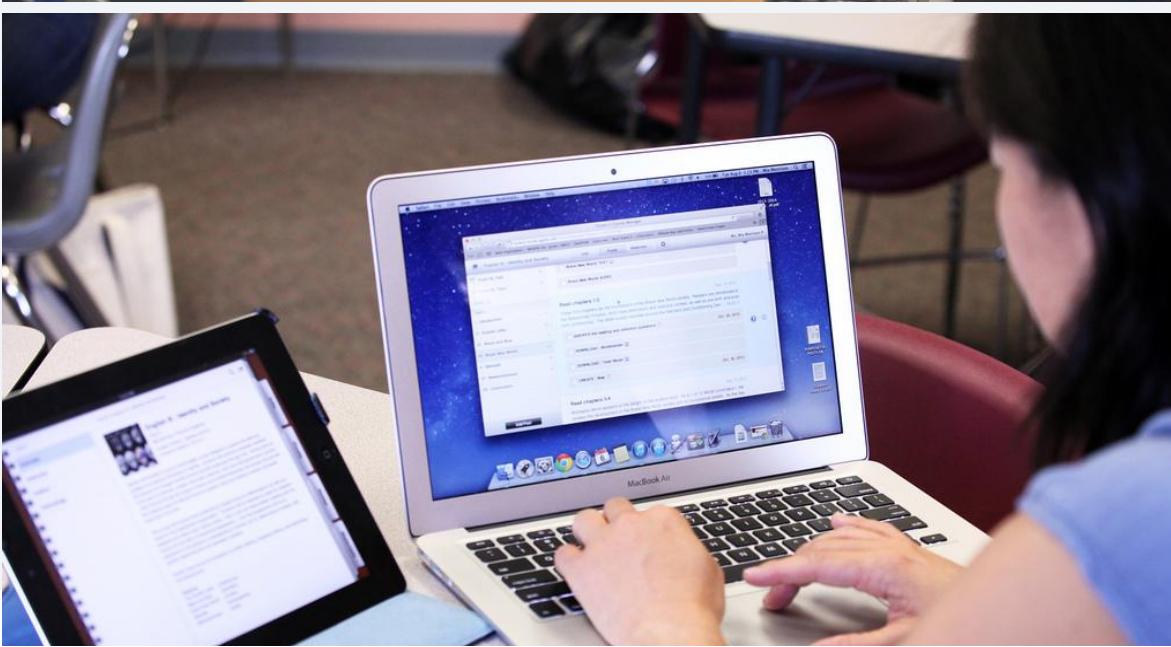
The Solution

A customizable web based application which can record data, generate scorecard and conduct what-if analysis to save time and provide meaningful insights.



QUOTE

“An ideal tool would help me in reporting data accurately and taking data driven decisions”



BUILDING EMPATHY

Interviews + Observations

We interviewed and observed four Quality Improvement Advisors from different health organizations such as IU Health, Purdue Health etc. Some of the questions were:

- What are your major tasks?
- How do you report & analyze data?
- What are the major problems faced?
- How does collaboration happen?
- What tools do you currently use?

What we learned?

01

QIAs mainly use **MS Excel spreadsheets** to enter data and **frequently edit** values in the tables to compare their scores

02

They want to see the results in a concise and **visual format** which is easy to understand, share and explain to other stakeholders & providers

03

QIAs want to **quickly find** relevant data and practises from several others in the assessment list. They want a way to **organize** previous reports.

04

Due to the complexity of process and calculations they often **fail to complete** & deliver meaningful analytics reports on time.

RESEARCH INSIGHTS

Problems to Solve

We brought together our research data and created high level themes into which the major challenges faced by the QIA's fell under.

.01

Long reports and high error rates

.02

Tedious process to analyze the data

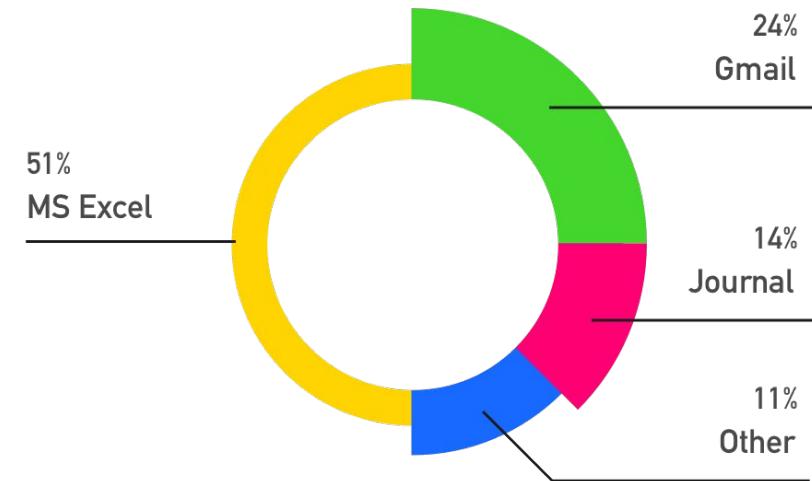
.03

Organizing & searching data in reports

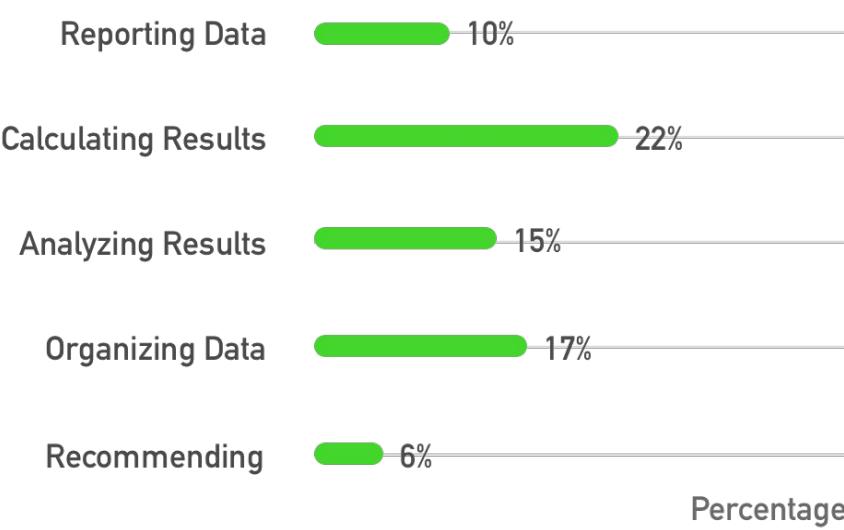
.04

Time consuming calculations in Excel

Tools Currently Used



Most Time Consuming Tasks



Selected Features

.01

Dashboard

A dashboard which shows all the important and frequently used features at one place to help users navigate faster

.02

Visualizations

Showing meaningful visualizations for the user to glance and understand the reports in an much efficient way

.03

Organize Reports

Create new reports and save previous ones at one common place to search and compare anytime they want

.04

What-if Analysis

Give users opportunity to rework and check different scores without affecting the original scores in the report

EXPLORATION

Sketching

ADD DATA

= Select Reporting Method

Provider

Measure

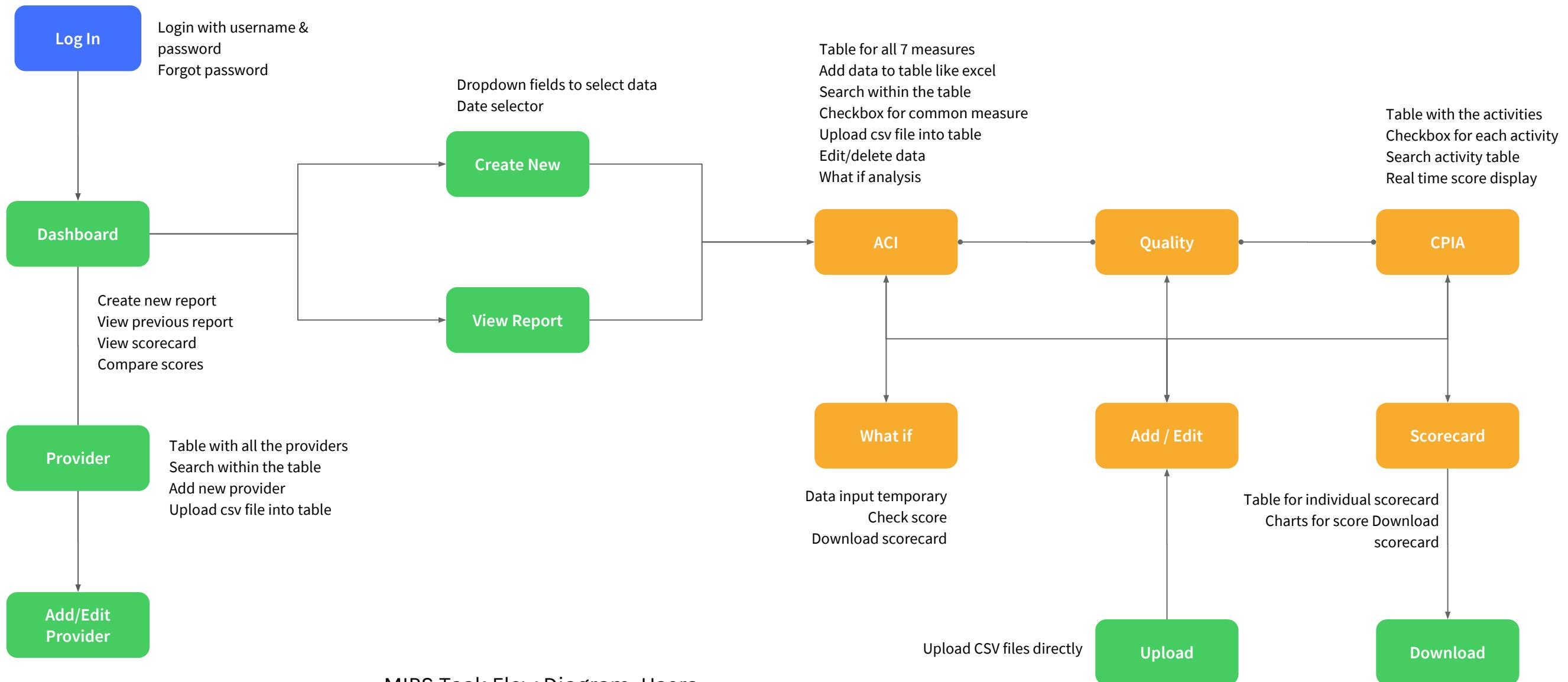
Number out of

or delete

| ADD DATA | |
|--|--|
| PROVIDER : | <input type="text"/> |
| e-Prescribing : | <input type="checkbox"/> out of <input type="checkbox"/> |
| Health Info. Exchange : | <input type="checkbox"/> out of <input type="checkbox"/> |
| Provide Patient Access : | <input type="checkbox"/> out of <input type="checkbox"/> |
| View, Download, Transmit : | <input type="checkbox"/> out of <input type="checkbox"/> |
| Secure Messaging | <input type="checkbox"/> out of <input type="checkbox"/> |
| <input type="button" value="ADD"/> <input type="button" value="NEW"/> <input type="button" value="SAVE"/> <input type="button" value="RESET"/> | |

A hand-drawn wireframe diagram of a software application interface. The top navigation bar includes 'Account' and 'Help'. The left sidebar has a '≡ MENU' icon, 'DASHBOARD' (selected), 'ACI' (with 'VIEW', 'ADD', 'RESULT' sub-options), 'QUALITY' (with 'VIEW', 'ADD', 'RESULTS' sub-options), 'CPIA' (with 'VIEW', 'ADD' sub-options), and 'RESULTS'. The main content area contains three sections: 'ACI' (containing 'VIEW', 'ADD', 'RESULTS' boxes), 'QUALITY' (containing 'VIEW', 'ADD', 'RESULTS' boxes), and 'CPIA' (containing an empty box).

Flow Diagram



LOW FIDELITY DESIGN

Wireframes

1.1 Dashboard

This wireframe shows the initial dashboard interface. It includes a header with user information and a navigation menu. The main area features a large 'Create New Report' button, a section for recently created reports, and a 'Compare Scores' chart.

2.1 New Report

This wireframe displays the 'Create New Report' form. It requires the user to enter the organization's name, start and end dates, the number of providers, practice type, business type, reporting type, gross NPI, and TIN number. A 'CREATE' button is at the bottom.

2.2 Add ACI

This wireframe shows the 'Edit Report' page for adding an ACI. It includes fields for provider name, e-prescribing, patient access, health information exchange, and patient-specific education, each with a progress bar indicating completion.

3.1 View ACI

This wireframe shows a table of reporting metrics. Each row contains a checkbox, the metric name, and its current status. The table includes columns for provider name, e-prescribing, patient access, health information exchange, and patient-specific education.

2.3 Add Quality

This wireframe shows the 'Edit Report' page for adding quality metrics. It includes fields for provider name, select reporting method, and a section for adding measures. A 'SAVE' button is at the bottom.

3.2 View Quality

This wireframe shows a table of quality measures. Each row contains a checkbox, the measure name, and its current status. The table includes columns for provider name, measure names, and reporting status.

2.4 View CPIA

This wireframe shows a table of CPIA metrics. Each row contains a checkbox, the metric name, and its current status. The table includes columns for provider name, activity name, activity description, category name, activity weight, and points.

4.1 View ACI Score

This wireframe shows a table of ACI scores. Each row contains a checkbox, the provider name, base score, performance score, bonus score, final score, e-prescribing, health information exchange, and provider access. The table includes columns for these metrics.

MOODBOARD

UI Inspiration

The moodboard displays a variety of user interface elements and design styles:

- CRM Dashboard:** Shows a list of contacts with columns for Name, Last Name, Email, Lead Score, Phone, Tags, and Created Date. It includes filters, sorting options, and a contact search bar.
- Financial Dashboard:** Displays financial metrics like monthly revenue (\$1300.00), open payments (\$4500.00), and invoices (23 Nos). It features a chart showing Revenue Breakdown for the 1st Quarter and a world map showing allocation by region.
- Review Analysis Tool:** Provides a Page Speed Score of 82.18, an average rating of 4.5, and sentiment analysis for positive (71%) and negative (19%) reviews. It also shows a timeline of reviews and sources.
- Search Results:** A Google search for "Moraine lake sunset" showing results for images, maps, and news articles.
- Schedule Application:** A calendar view for November 2016 showing appointments and events. It includes a modal for adding new events and a sidebar for managing tasks.
- Testimonials:** A section titled "Lasso Testimonials" featuring a list of users and their quotes, such as "Focus Lab is one of the best design agencies..." and "I'm running out of adjectives on 'you rock'".
- Ticket Management System:** A dashboard for ticket modification, console redesign, and landing page development. It includes a ticket list with columns for Ticket ID, Phone, Tag, and Created Date, along with user profile cards.
- Customer Support:** A dashboard for customer support with tabs for Dashboard, Accounts, Customers, Cards, Transactions, Reports, Customer Support, User Management, and More. It includes a table of accounts and a search bar.
- Project Management:** A table showing project details like Nazwa, Start, Koniec, Budżet (h), Prognoza, Limit, Spływ, Wyk. (%), and Manager for various locations and dates.

Style Guide

TYPOGRAPHY

H1 Roboto 48px

H2 Roboto 36px

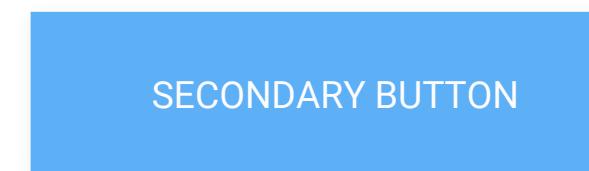
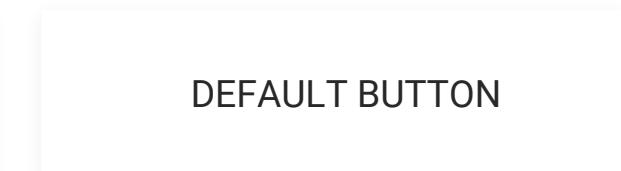
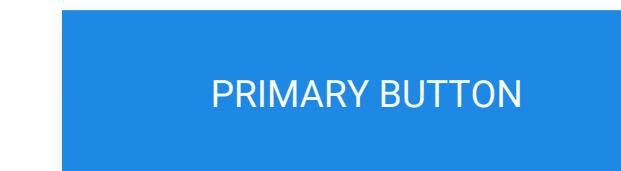
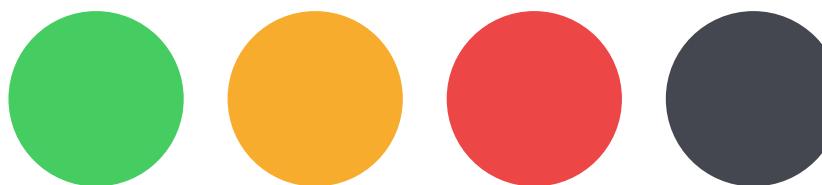
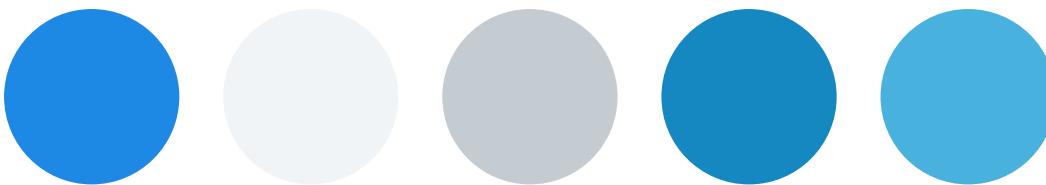
H3 Roboto 24px

H4 Roboto 18px

Body Text Demo

Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

PALETTE COLORS



HIGH FIDELITY

Visual Design

SIGN IN

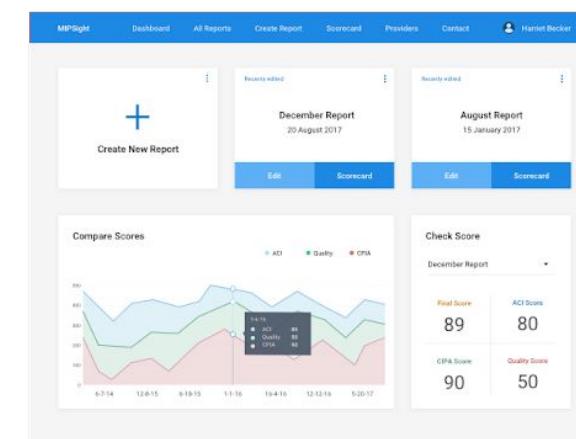
Email ID _____

Password _____

LOGIN

New User or Forgot Password?
Contact Admin

1. Sign In



3. Dashboard

Organization Name _____

Start Date: 26/12/2018 End Date: 26/12/2018

Number of Providers _____

Practice Type _____

Business type _____

Reporting Type _____

Group NPI _____

TIN Number (optional) _____

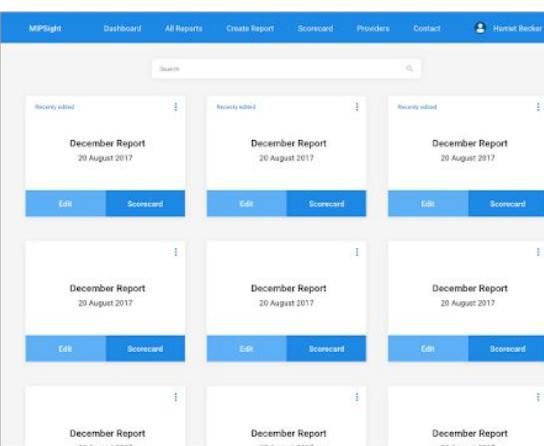
CANCEL **CREATE**

4. Create New

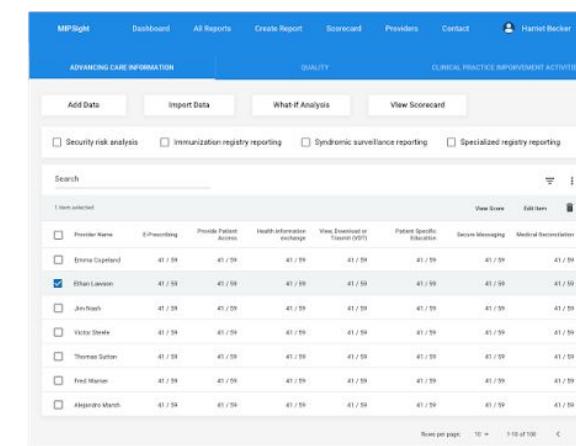
| Provider Name | E-prescribing | Provide patient access | Health information exchange | View, Download or Transmit (VDT) | Patient Specific Education | Secure Messaging | Medical Reconciliation |
|-----------------|---------------|------------------------|-----------------------------|----------------------------------|----------------------------|------------------|------------------------|
| Ethann Lawless | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Jim Neas | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Victor Steele | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Thomas Sutton | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Fred Warner | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Alejandro Marsh | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |

CANCEL **ADD**

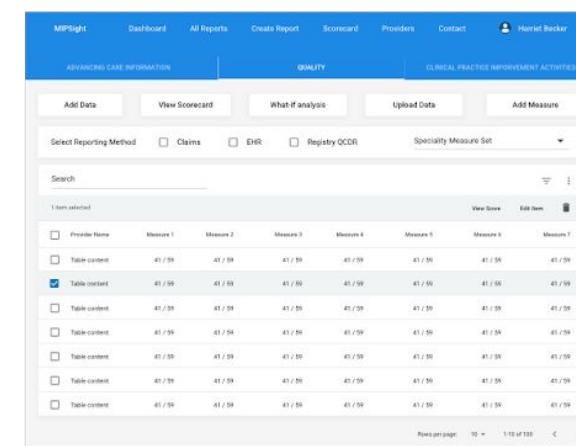
2. Add ACI



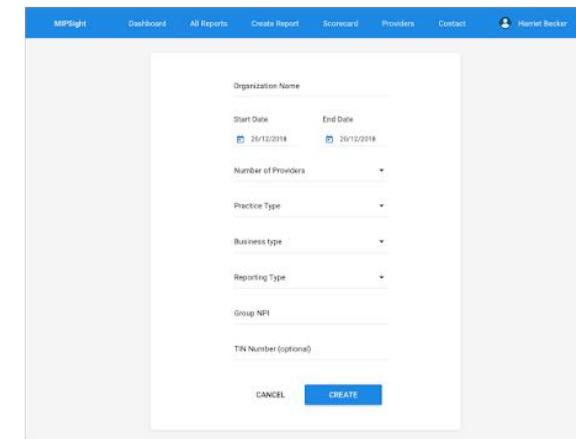
5. All Reports



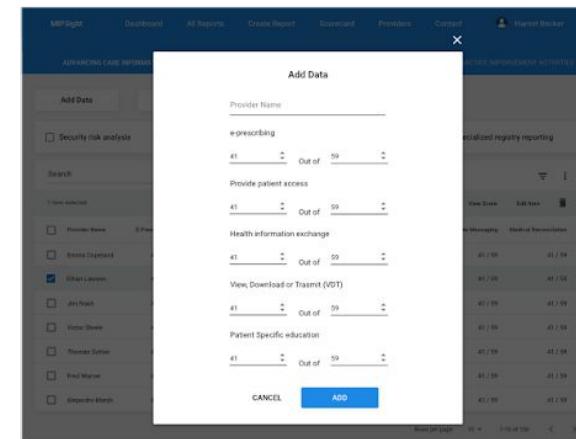
6. View ACI



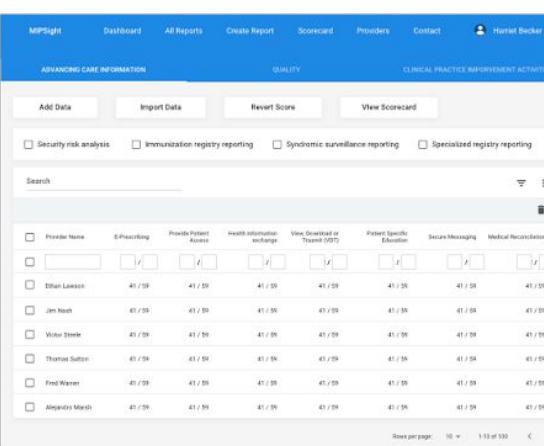
7. View Quality



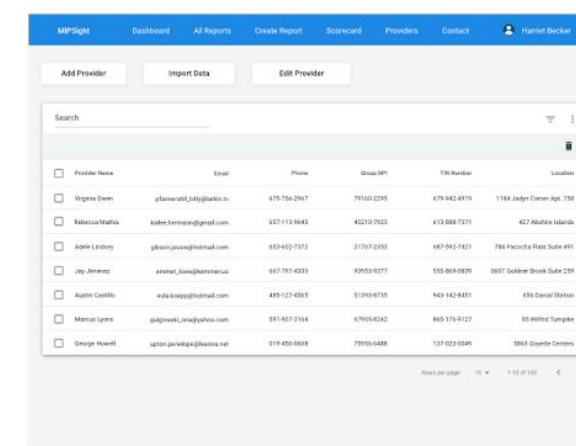
7. View CPIA



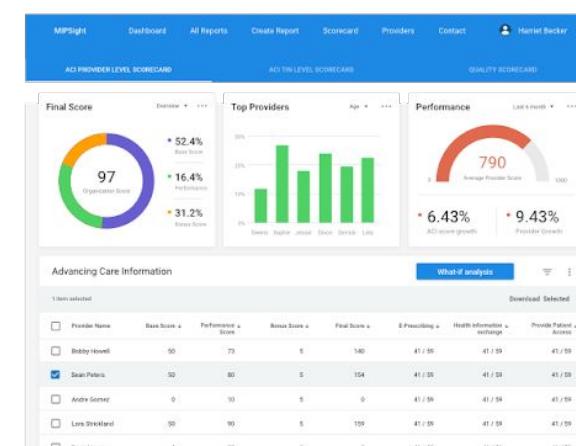
12. Quality Report



9. What-if Analysis



10. View Provider

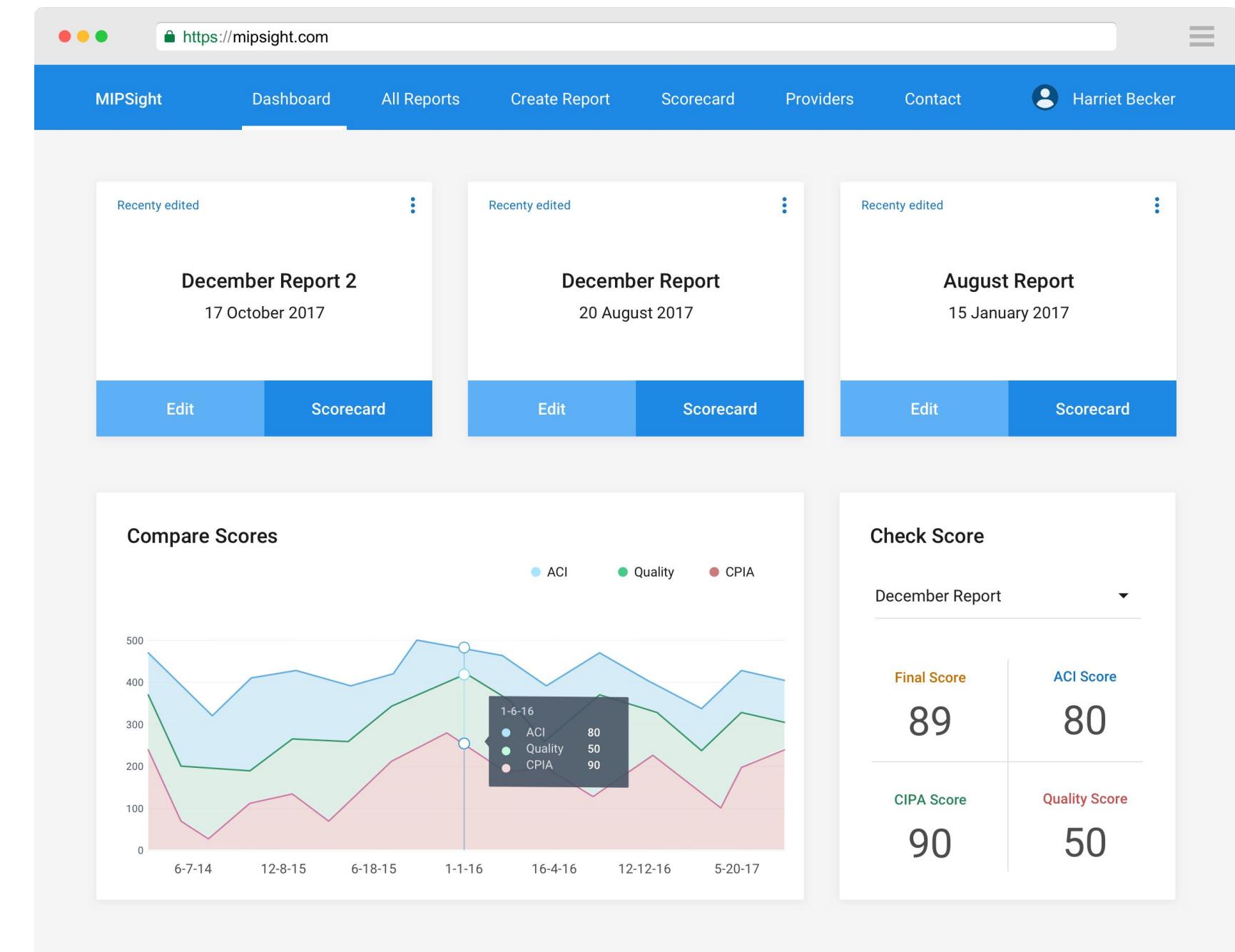


11. ACI Report

HIGH FIDELITY DESIGN

Dashboard

1. View recent reports
2. Edit Report and view scorecards
3. Compare scores from different reports
4. Check scores directly of any report



HIGH FIDELITY DESIGN

View Report

1. Add and import data
2. Search data in tables
3. View scorecards in real time
4. Edit & delete items in table

The screenshot shows a web browser window for <https://mipsight.com>. The header includes the site logo, a lock icon indicating security, the URL, and a user profile for 'Harriet Becker'. The main navigation bar has tabs for 'MIPSight', 'Dashboard', 'All Reports', 'Create Report', 'Scorecard', 'Providers', and 'Contact'. Below the navigation is a secondary menu with three categories: 'ADVANCING CARE INFORMATION', 'QUALITY', and 'CLINICAL PRACTICE IMPROVEMENT ACTIVITIES'. Under 'QUALITY', there are four buttons: 'Add Data', 'Import Data', 'What-if Analysis', and 'View Scorecard'. The 'View Scorecard' button is highlighted. Below these buttons is a row of checkboxes for reporting types: 'Security risk analysis', 'Immunization registry reporting', 'Syndromic surveillance reporting', and 'Specialized registry reporting'. A search bar labeled 'Search' is present. The main content area displays a table titled 'Scorecard' with one item selected. The table has columns for Provider Name, E-Prescribing, Provide Patient Access, Health information exchange, View, Download or Transmit (VDT), Patient Specific Education, Secure Messaging, and Medical Reconciliation. The selected row for Ethan Lawson shows checked boxes in the first two columns and a checked checkbox in the fifth column. Other rows for Jim Nash, Victor Steele, Thomas Sutton, Fred Warner, and Alejandro Marsh are listed below. At the bottom right of the table are buttons for 'View Score' and 'Edit Item', and a trash can icon. Navigation controls at the bottom include 'Rows per page: 10 ▾ 1-10 of 100' and arrows.

| Provider Name | E-Prescribing | Provide Patient Access | Health information exchange | View, Download or Transmit (VDT) | Patient Specific Education | Secure Messaging | Medical Reconciliation |
|-----------------|---------------|------------------------|-----------------------------|----------------------------------|----------------------------|------------------|------------------------|
| Emma Copeland | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Ethan Lawson | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Jim Nash | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Victor Steele | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Thomas Sutton | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Fred Warner | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Alejandro Marsh | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |

HIGH FIDELITY DESIGN

What-if Analysis

1. Click on any table to make it editable
2. Add any value for numerator & denominator
3. View updated scorecard
4. Revert score to change it back

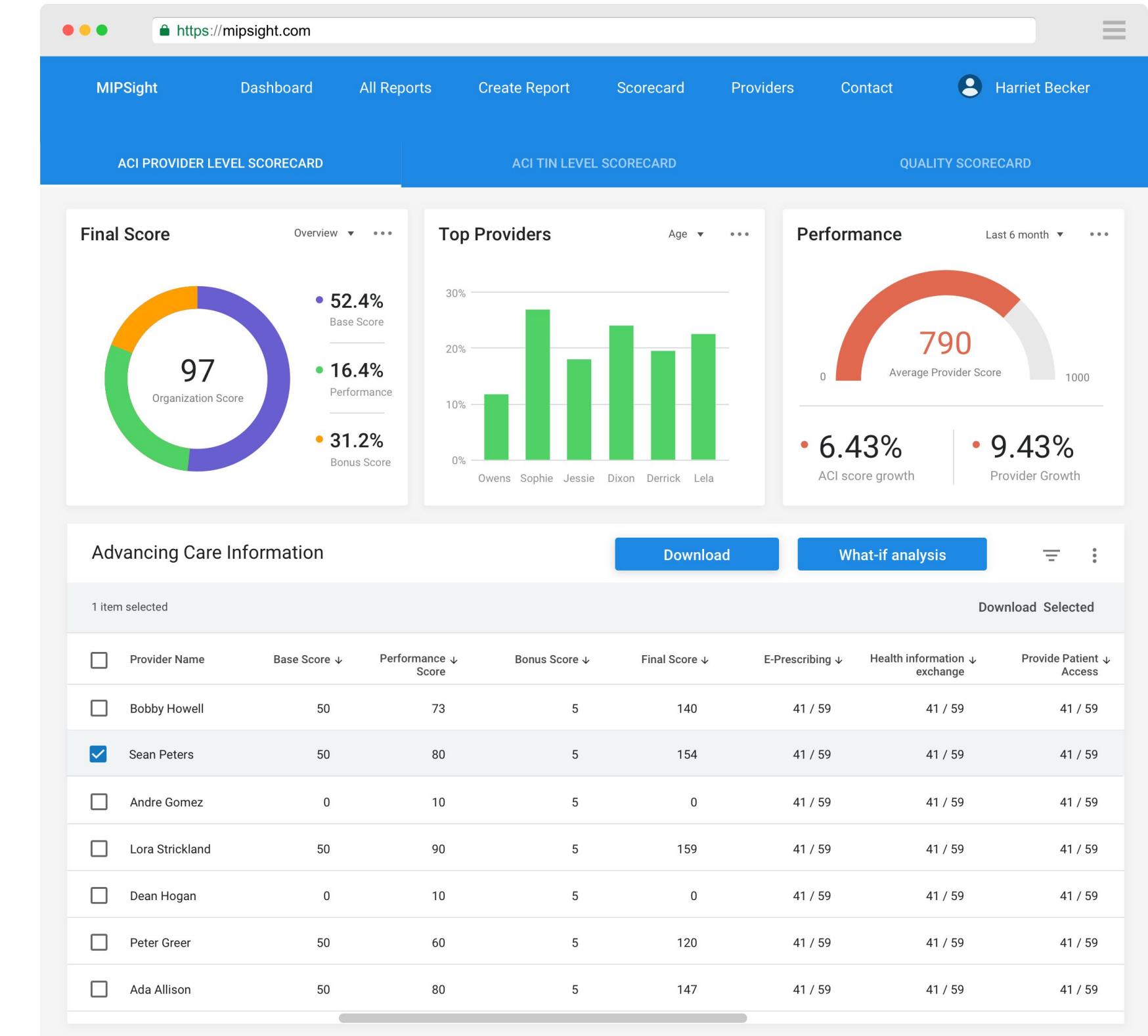
The screenshot shows the MIPSight Scorecard interface. At the top, there's a navigation bar with links for MIPSight, Dashboard, All Reports, Create Report, Scorecard, Providers, Contact, and a user profile for Harriet Becker. Below the navigation is a blue header bar with tabs for ADVANCING CARE INFORMATION, QUALITY, and CLINICAL PRACTICE IMPROVEMENT ACTIVITIES. In the center, there are four buttons: Add Data, Import Data, Revert Score, and View Scorecard. Below these buttons is a row of checkboxes for reporting categories: Security risk analysis, Immunization registry reporting, Syndromic surveillance reporting, and Specialized registry reporting. A search bar is followed by a table of provider data. The table has columns for Provider Name, E-Prescribing, Provide Patient Access, Health information exchange, View, Download or Transmit (VDT), Patient Specific Education, Secure Messaging, and Medical Reconciliation. Each row contains a checkbox next to the provider name and a series of boxes for each reporting category. The row for Ethan Lawson is highlighted with a red border. At the bottom right, there are pagination controls for Rows per page (10), page number (1-10 of 100), and navigation arrows.

| Provider Name | E-Prescribing | Provide Patient Access | Health information exchange | View, Download or Transmit (VDT) | Patient Specific Education | Secure Messaging | Medical Reconciliation |
|-----------------|---|---|---|---|---|---|---|
| Emma Copeland | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Ethan Lawson | <input type="text"/> / <input type="text"/> |
| Jim Nash | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Victor Steele | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Thomas Sutton | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Fred Warner | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |
| Alejandro Marsh | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 | 41 / 59 |

HIGH FIDELITY DESIGN

Report Scorecard

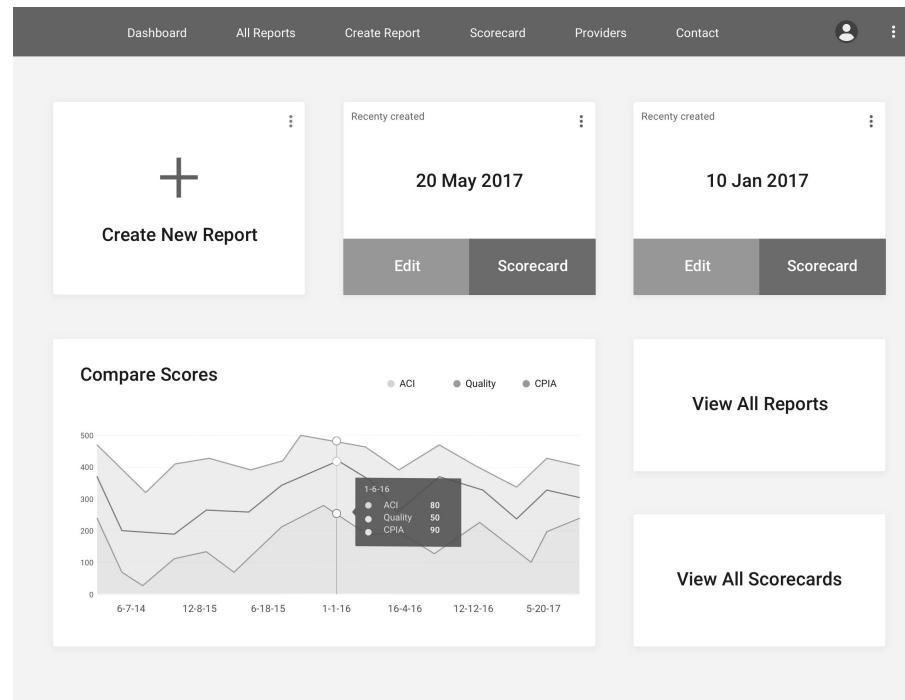
1. Visualization for report scorecard
2. Showing top providers
3. Showing report performance
4. Download report scorecard



ITERATIONS

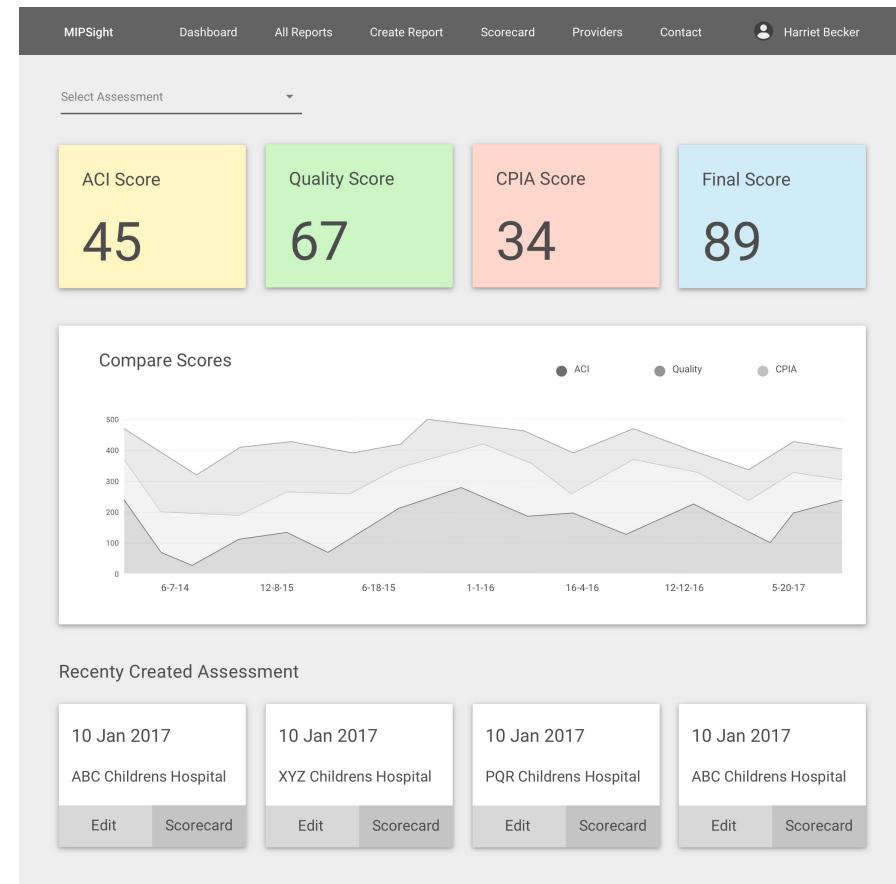
Design Alternatives

Dashboard v1



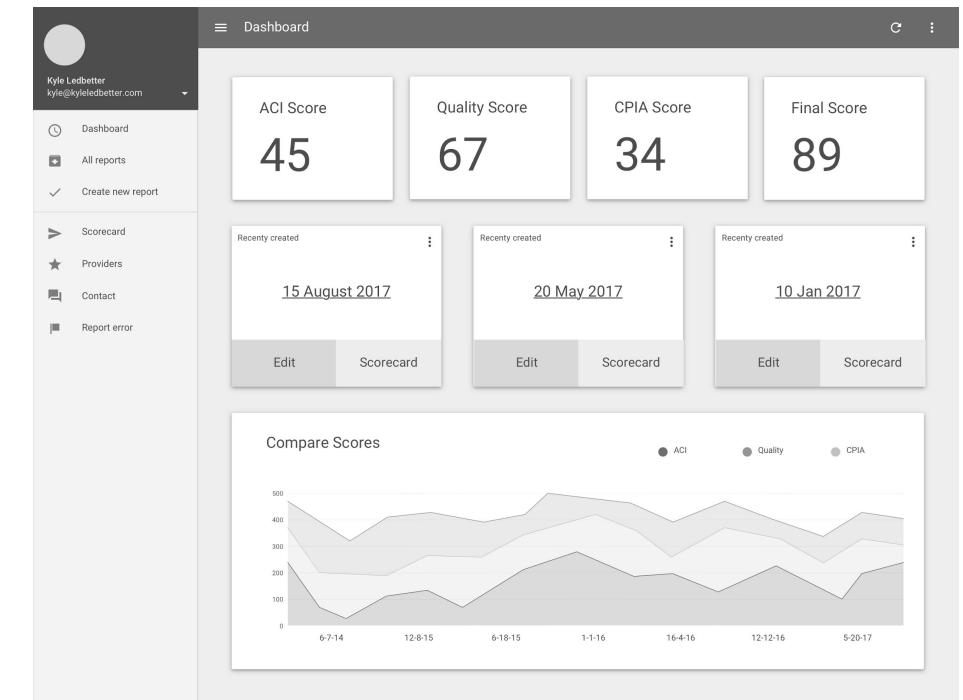
1. Create New Reports Quickly
2. Shortcut to select 2 recent report
3. View scorecard & reports
4. Visualize to compare scores

Dashboard v2



1. Top navigation to increase space
2. Adding more reports to select from
3. Color coding for score status

Dashboard v3

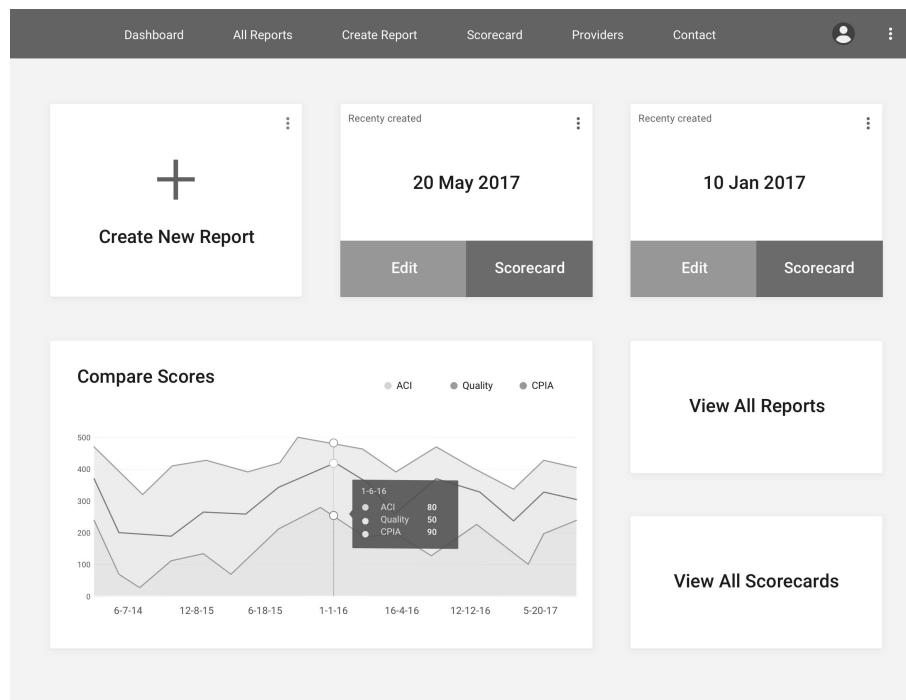


1. Exploring side navigation
2. Showing important stats at top
3. Users can select 3 recent reports

EARLY TESTING

Expert Evaluation

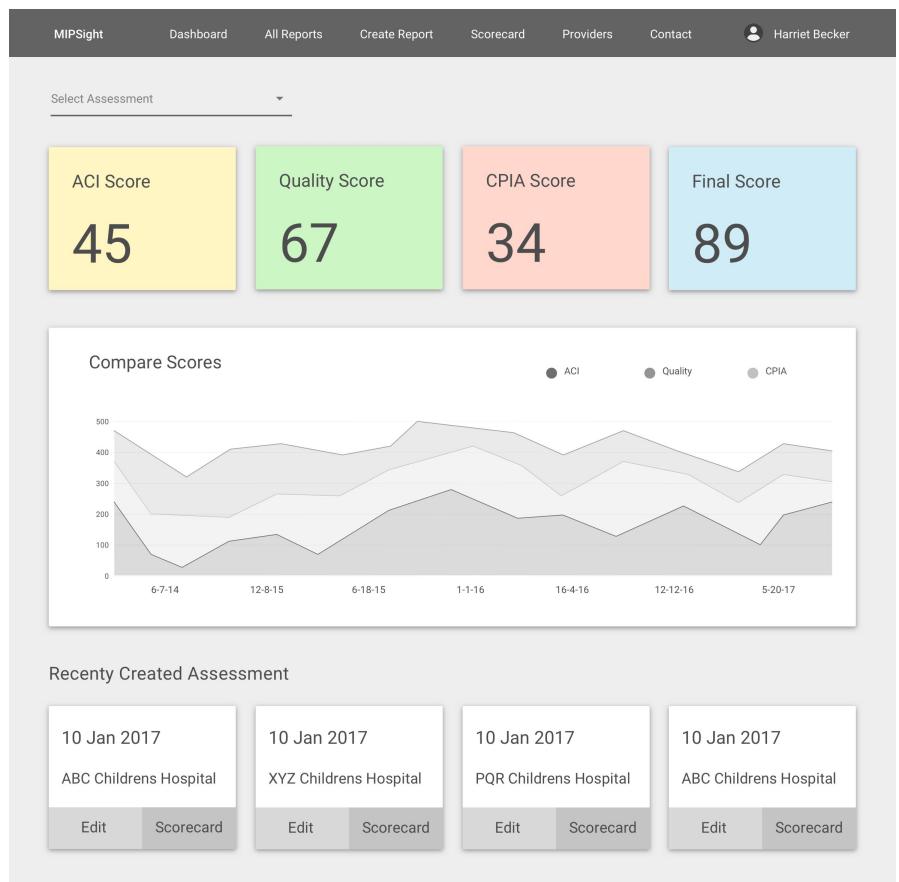
Dashboard v1



ISSUES:

1. Repetitive links and buttons on dashboard
2. Not showing scores of report

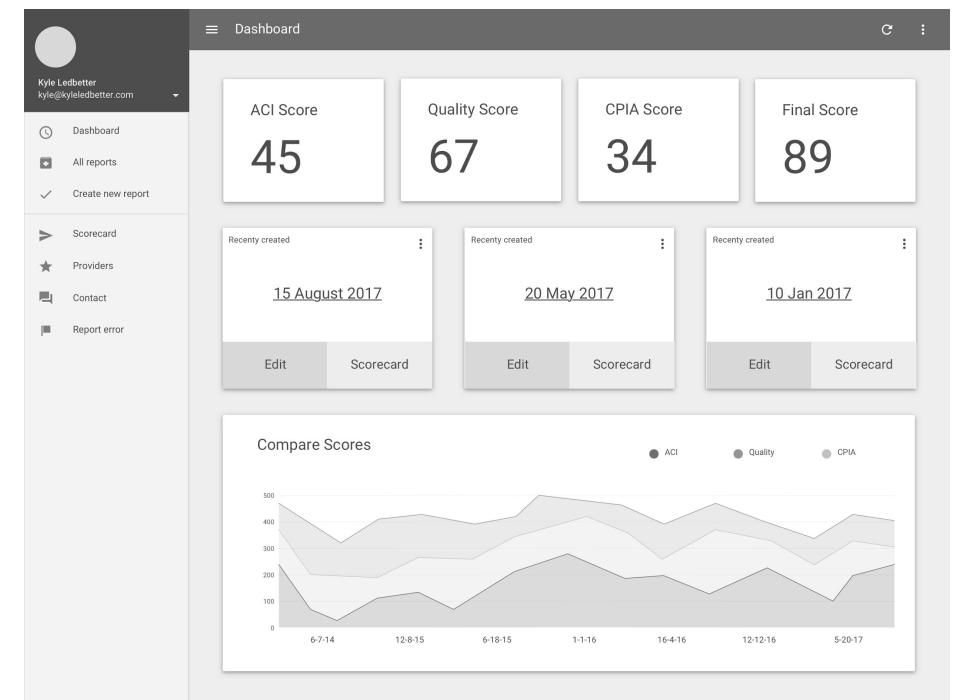
Dashboard v2



ISSUES:

1. Long dashboard page with too much data
2. Users probably switch between 2-3 reports

Dashboard v3



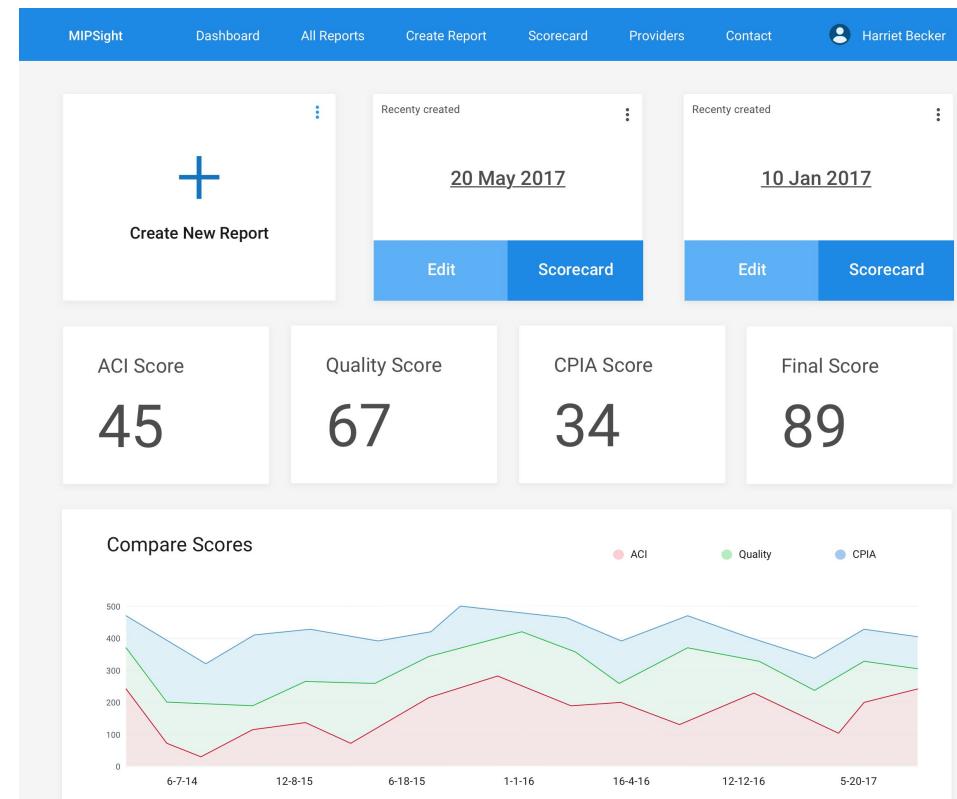
ISSUES:

1. Side navigation leaves less space for long tables
2. Not sure if scores are user's first priority

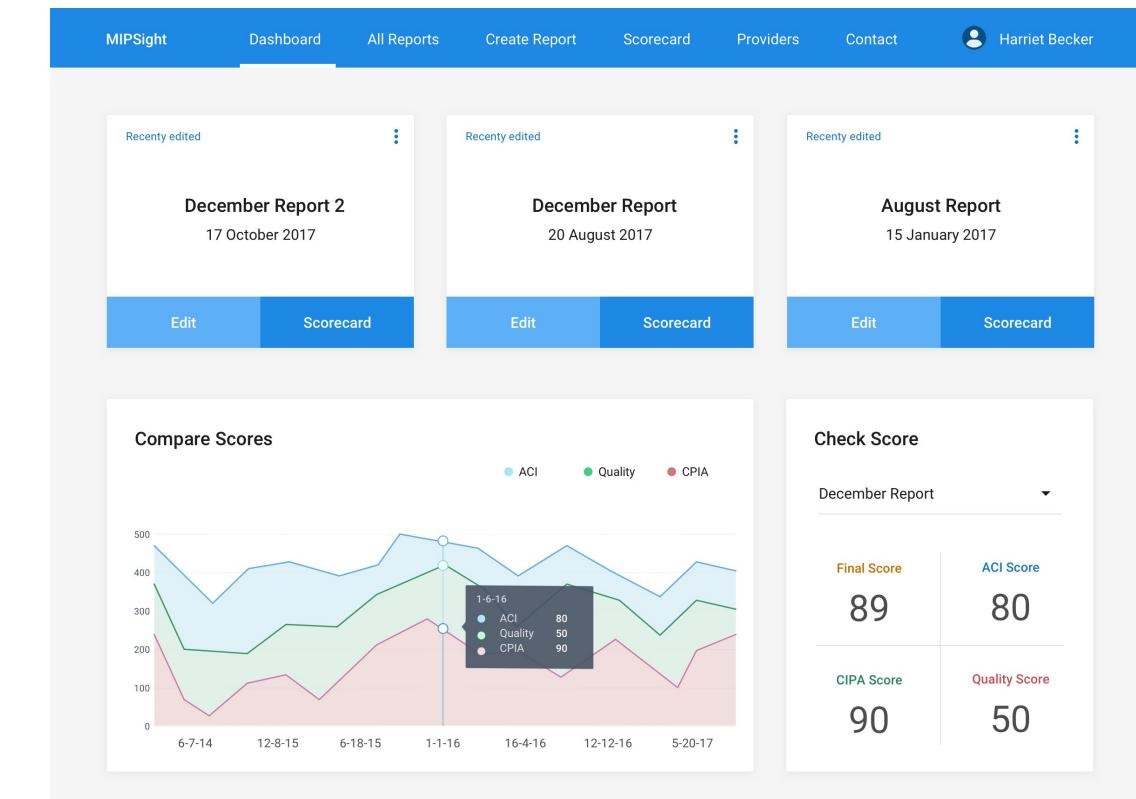
EVALUATION RESULTS

User Testing

Scorecard v4



Scorecard v5



ISSUES:

1. Users getting confused in creating report
2. Users not able to see score for different report
3. Users wanted to name each one with dates

FIXED:

1. Removed Create Report card
2. Option to choose score for any report
3. Added visual cues to make scores understand
4. Added report names with date

EVALUATION RESULTS

User Testing

Upload File

MIPSight Dashboard All Reports Create Report Scorecard Providers Contact  Harriet Becker

ADVANCING CARE INFORMATION 

CLINICAL PRACTICE IMPROVEMENT ACTIVITIES 

Add Data Import Data What-if Analysis View Scorecard 

Security risk analysis

Search 

1 item selected

| <input type="checkbox"/> | Provider Name | E-Pres |
|-------------------------------------|-----------------|---------|
| <input type="checkbox"/> | Emma Copeland | 41 / 59 |
| <input checked="" type="checkbox"/> | Ethan Lawson | 41 / 59 |
| <input type="checkbox"/> | Jim Nash | 41 / 59 |
| <input type="checkbox"/> | Victor Steele | 41 / 59 |
| <input type="checkbox"/> | Thomas Sutton | 41 / 59 |
| <input type="checkbox"/> | Fred Warner | 41 / 59 |
| <input type="checkbox"/> | Alejandro Marsh | 41 / 59 |

Drag a CSV file here

OR

Choose File

Specialized registry reporting   

Score Messaging Medical Reconciliation

| 41 / 59 | 41 / 59 |
|---------|---------|
| 41 / 59 | 41 / 59 |
| 41 / 59 | 41 / 59 |
| 41 / 59 | 41 / 59 |
| 41 / 59 | 41 / 59 |
| 41 / 59 | 41 / 59 |
| 41 / 59 | 41 / 59 |
| 41 / 59 | 41 / 59 |

Rows per page: 10 ▾ 1-10 of 100 < >

ISSUES FOUND:

Users upload unformatted CSV file which created wrong reports & scores

Excel Template

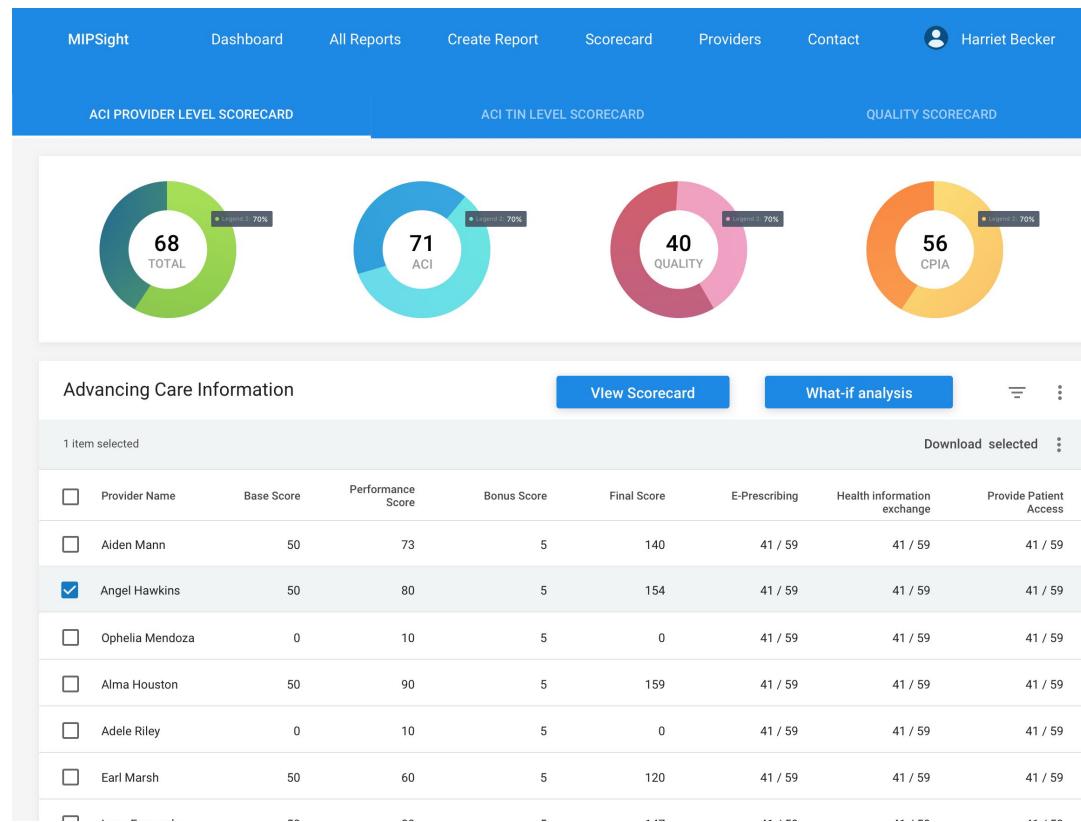
SOLUTION CREATED:

Created a CSV & Excel template to fill and upload existing data

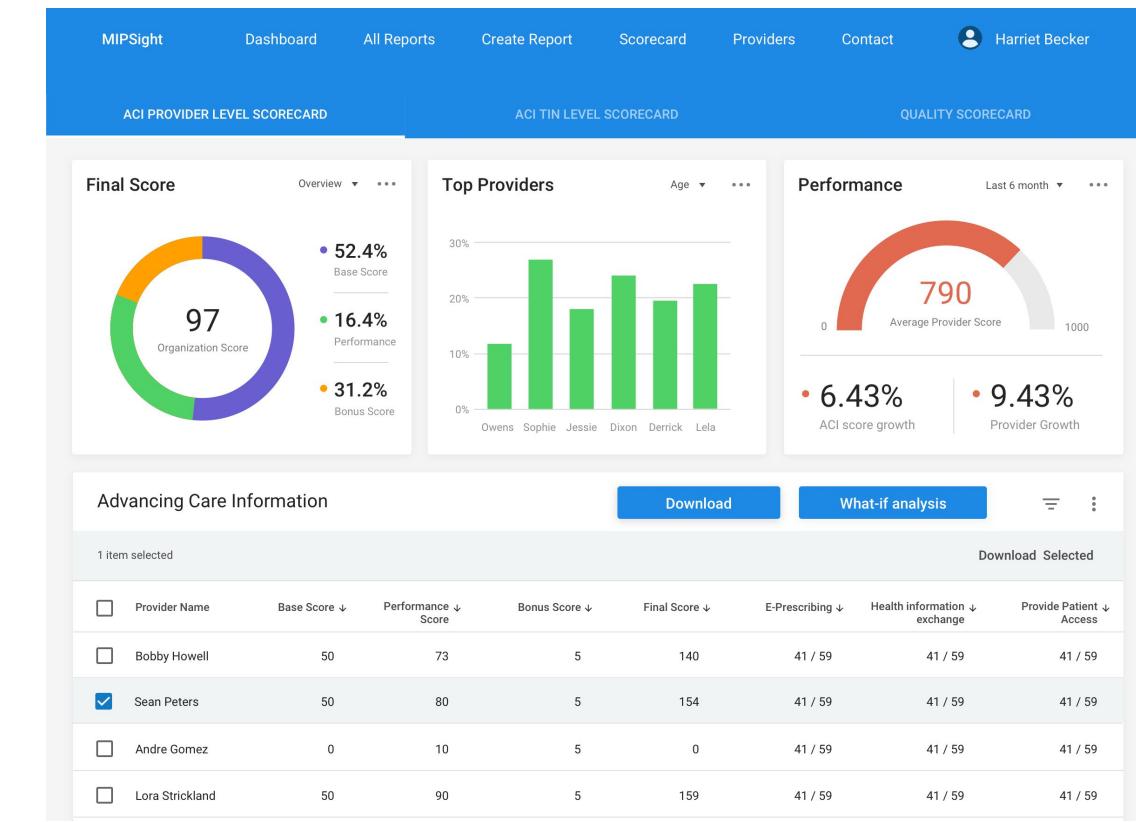
EVALUATION RESULTS

User Testing

Scorecard v1



Scorecard v2



ISSUES:

1. Pie charts not relevant for this data
2. View Scorecard did not imply users could share it
3. Need more visualizations for better analysis

FIXED:

1. Add more relevant visualizations
2. Added option to download CSV file

PRODUCT IMPACT

The Result

Currently used by Quality Improvement Advisors (QIA) to guide **15,000+ clinicians** across universities, health systems and independent provider-practices in five Midwestern states.

Based on the initial feedback from the actual users we are now working on adding some additional functionalities to improve the product.

Learning

.01

Have a clear scope & problem statement

If the problem framing is not clear, it could lead to an endless churn of design iterations that are not easy to test. Understanding the scope really helps in understanding how broad our design funnel can be, before we dig deep.

.02

Constraints help us focus on what matters

By paying attention to constraints – and working within the creative space they afford us – it's possible to create something slim and functional that users will adopt. Constraints can guide decisions and resolve ambiguity.

.03

Design is a collaborative & team effort

UX is the responsibility of the whole product team, not only the designer. To improve collaboration I learned coding skills, involved developers in testing sessions and engaged them in design process. They often had a better understanding of data, edge cases and other parts that I missed.

.04

Get feedback & test early to find problems

I conducted 2 rounds of testing to ensure we build the right product. Development started only after usability issues were addressed. It helped me to validate assumptions, steer product and design direction more confidently, and uncover hidden issues using actual user feedback.